

**WHAT IS CLAIMED IS:**

1. A method for detecting the application of a fluid sample onto a non-porous test strip in an optical meter, said method comprising:

5 (a) obtaining reflectance data from a bottom side of said test strip opposite a fluid sample application site for a period ranging from a time prior to application of said fluid sample to said fluid sample application site to a time after application of said fluid sample to said fluid sample application site; and

10 (b) deriving from said reflectance data the application of said fluid sample onto said test strip.

2. The method according to Claim 1, wherein said method comprises irradiating said bottom side of said test strip with visible light during said period.

15 3. The method according to Claim 2, wherein said visible light is of a narrow range of wavelengths.

4. The method according to Claim 1, wherein said non-porous test strip is fabricated from a polymeric material.

20 5. The method according to Claim 1, wherein said reflectance data is obtained by the method comprising:

(i) introducing a test strip into said optical meter and irradiating a portion of said optical meter occupied by a bottom side of said test strip when said test strip is inserted into said meter with light of narrow range of wavelength;;

25 (ii) applying a fluid sample to said test strip while continuing to irradiate said portion; and

(iii) collecting reflected light from said portion during said steps (i) and (ii) for a period after said step (ii) to obtain said reflectance data.

6. The method according to Claim 1, wherein the fluid sample is a physiological sample.

7. The method according to Claim 6, wherein said physiological sample is blood.

8. A method for detecting that a physiological fluid sample has been applied to a non-porous polymeric test strip in an optical meter, said method comprising:

(a) obtaining reflectance data from a bottom side of said test strip opposite a fluid sample application site, wherein said reflectance data is obtained by the method comprising:

(i) introducing a test strip into said optical meter and irradiating said bottom side of said test strip with light of a narrow range of wavelengths; (ii) applying said physiological fluid sample to said sample application site of said test strip while continuing to irradiate said portion; and (iii) collecting reflected light from said portion during said steps (i) and (ii) and for a period after said step (ii) to obtain said reflectance data

whereby said reflectance data is obtained; and

(b) deriving from said reflectance data that said fluid sample has been applied to said test strip surface.

9. The method according to Claim 8, wherein said wavelengths range from about 550 to 590 nm.

10. The method according to Claim 8, wherein said physiological sample is blood.

11. An optical meter that can determine when sample has been applied to the surface of a test strip inserted into it, said meter comprising:

(a) means for collecting reflectance data from a region of said meter occupied by a sample application location of said test strip when present in said meter, wherein said

5 means comprises:

(i) a light source for irradiating said region of said meter; and

(ii) a detector for detecting reflected light from said region of said meter;

(b) means for comparing said reflectance data to a reference value to obtain a 10 sample present signal; and

(c) means for actuating a fluid sample movement means of said test strip in response to said sample present signal.

12. The optical meter according to Claim 11, wherein said light source is a source of 15 visible light.

13. The optical meter according to Claim 12, wherein said light has a wavelength 20 ranging from about 550nm to 590nm.

14. The optical meter according to Claim 11, wherein said meter further comprises 25 said test strip.

15. An optical meter that can determine when sample has been applied to the surface of a test strip inserted into it, said meter comprising:

(a) means for collecting reflectance data from a region of said meter occupied by a sample application location of said test strip when present in said meter, wherein said means comprises:

5 (i) a light source for irradiating said region of said meter with light of wavelength ranging from about 550 to 590nm; and

(ii) a detector for detecting reflected light from said region of said meter;

(b) means for comparing said reflectance data to a reference value to obtain a sample present signal; and

10 (c) means for actuating a fluid sample movement means of said meter in response to said sample present signal.

16. The optical meter according to Claim 15, wherein said fluid movement means is a bladder depressing means.

15           17. The optical meter according to Claim 15, wherein said test strip is present in said meter.

18. The optical meter according to Claim 17, wherein said test strip is a non-porous  
20 test strip.